Company Information

Ligand Pharmaceuticals Inc. (NASDAQ) Symbol : LGND

Sector: Healthcare

Headquarters

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Fiscal Year Ends **December**

Selected Financial Data

Close (07/23/2008)	3.4M
Volume (07/23/2008)	250M
Weekly High	3.52$
Weekly Low	3.2$
Weekly Close	3.4$
Shares Outstanding	95M
Market Cap	$323M
Cash On Hand	$90M
Years In Cash	Profitable
Technology Value	$232M

Business Summary

Ligand Pharmaceuticals Inc is a biotech company focused on the discovery and development of new medical treatments. The company was founded in 1987 and aims to solve unmet medical needs in a number of therapeutic areas, including: Thrombocytopenia, Hepatitis C, Cancer, Hormone-related diseases, Osteoporosis, and Inflammatory diseases. Ligand's Intracellular receptor (IR) technology is the result of its ground-breaking work in the field of gene transcription. The company's Intracellular receptor (IR) technology applies the most advanced cell-based assay and gene-expression tools to discover new and important medicines. It has concentrated its research efforts on the development of drug candidates from its Thrombopoietin (TPO) program; expanding the therapeutic potential of Selective Glucocorticoid Receptor

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Modulators (SGRM) and Selective Androgen Receptor Modulators (SARM); advancing the understanding of the activities of hormones and hormone-related drugs; and Making scientific discoveries related to IR technology. Ligand Pharmaceuticals product folio includes LGD-4665, a Thrombopoietin oral mimetic; LGD-3303, a selective androgen receptor modulator (SARM); Erythropoiein (EPO) Research Program focuses on developing small molecule agonists for the EPO receptor that stimulates the differentiation of blood marrow stem cells to form red blood cells; AiPC program, an androgen-independent for prostate cancer, acne, androgenetic alopecia and other diseases; and SGRM, a selective glucocorticoid receptor modulator developed for treatment of inflammation and cancer. Ligand Pharmaceuticals has collaborations with King Pharmaceuticals, GlaxoSmithKline, Wyeth, Pfizer and TAP Pharmaceutical Products Inc. It has sold its oncology product line to Eisai Co., LTD (Tokyo) and Eisai Inc. (New Jersey) in October 2006 and AVINZA product line to King Pharmaceuticals in February 2007.

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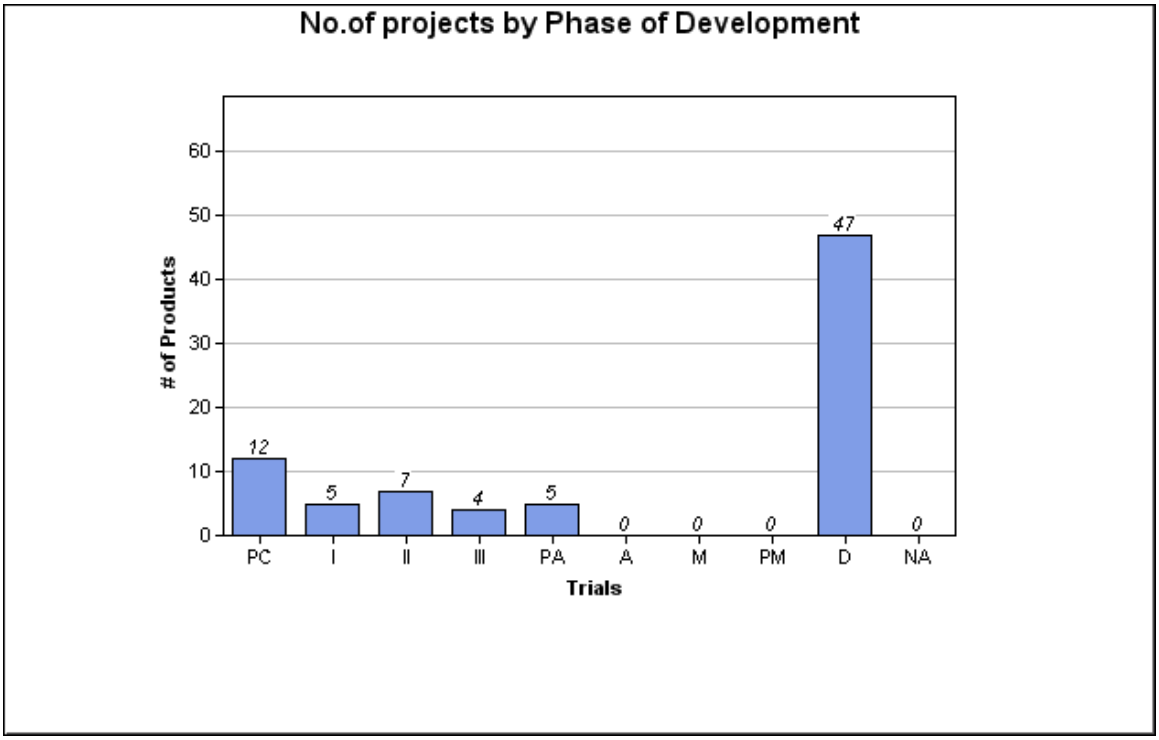
Product Glance

Trial Phase	No of Products
Pre Clinical	12
Clinical Trial Phase I	5
Clinical Trial Phase II	7
Clinical Trial Phase III	4
Pending Approval	5
Discontinued	47



MedTRACK Disease Hub Classification

Disease Hub	No of Products
Autoimmune and Inflammation	3
Blood and Lymphatic System	8
Cancer	24
Cardiovascular and Circulatory System	3
Central Nervous System	1
Dermatology	10
Kidneys and Genito-Urinary System	1
Metabolic/Endocrinology	11

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Details	a three-year research program (with an option to extend the program for two years at AHP's election) to discover and develop drugs which interact with estrogen or progesterone receptors for use in hormone replacement therapy, anti-cancer therapy, gynecological diseases, central nervous system disorders associated with menopause and fertility control. AHP has been granted exclusive worldwide rights to all products discovered in the collaboration that are agonists or antagonists to the PRs and ERs for application in the fields of women's health and cancer therapy. In January 1996, AHP exercised its option to include compounds discovered by Ligand that modulate PRs and to expand the collaboration to encompass the treatment or prevention of osteoporosis through the ER. Ligand's proprietary PR modulators added to the collaboration include three series: LG1447 PR antagonists, LG2527 and LG2716 PR agonists. In May 1996, AHP expanded the collaboration to include four advanced chemical compound series from its internal ER-osteoporosis program.
8.Promacta	
Disease Hub	Blood and Lymphatic System
Description	Promacta contains eltrombopag as the active ingredient. It is an orally administered small molecule that interacts with the receptor for thrombopoietin. It stimulates thrombopoietin receptor on megakaryocytes and increases the production of platelets. It is being developed for the treatment of hepatitis C associated thrombocytopenia.
Therapeutic Indication	Thrombocytopenia
Mechanism of Action	Thrombopoietin (TPO) Receptor Agonist
Current Trial	III
Trial Details	November 5, 2007 GlaxoSmithKline announced the commencement of two parallel Phase III studies to assess the clinical benefits of its investigational compound Promacta/Revolade (eltrombopag) in hepatitis C-associated thrombocytopenia, a condition characterised by decreased platelet counts. The studies, ENABLE 1 and ENABLE 2 (Eltrombopag to Initiate and Maintain Interferon Antiviral Treatment to Benefit Subjects with Hepatitis C related Liver DiseasE), will measure the ability of eltrombopag to raise platelet counts sufficiently enough to enable the initiation of antiviral therapy and to allow sustained antiviral therapy in thrombocytopenic hepatitis C patients. The clinical benefit of eltrombopag will be measured by the proportion of subjects who are able to achieve sustained virological response. During the second quarter 2006, positive Phase II data for Promacta, a novel oral platelet growth factor,were received in patients with Hepatitis C associated thrombocytopenia. These results will be submitted for presentation at the American Association for the Study of Liver Disease (AASLD) meeting in October. Source: SEC file: 6-K (7/26/2006) December 2, 2005 Ligand Pharmaceuticals Incorporated announced that results reported by GlaxoSmithKline in Phase II studies of eltrombopag, SB-497115, a small-molecule drug that mimics the activity of thrombopoietin (TPO), a protein factor that promotes growth and production of blood platelets, were promising. On November 30, 2005, during a review of its oncology portfolio, GSK presented data from a Phase II dose-ranging clinical trial that showed 115 significantly raised platelet counts in adult patients. GSK described the phase II studies well underway in three major indications: idiopathic thrombocytopenia purpura (ITP), hepatitis C (HCV) and chemotherapy-induced thrombocytopenia (CIT). The Phase II results in adult patients with chronic ITP that had failed at least one prior therapy and with platelet counts less than 30,000 showed that 66% of patients receiving the 50 mg dose and 87% of patients treated with 115's highest dose (75 mg/day) had counts greater than or equal to 50,000 after six weeks and many of those had reached normal platelet levels within the first two to three weeks of treatment. November 30, 2005 GlaxoSmithKline plc updated investors and financial analysts in New York on the Company's rapidly expanding pipeline featuring innovative science that addresses a broad range of patient needs for cancer prevention, treatment and supportive care. An interim analysis of Phase II data also showed an encouraging platelet response in hepatitis C patients.
Last Updated	6/26/2008
Partnering Details	2/1/1995 -- Update on June 20, 2008: Ligand Pharmaceuticals Incorporated, a company engaged in discovering and

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Therapeutic Indication	Non-Small-Cell Lung Cancer
Mechanism of Action	Retinoid X Receptor-Alpha (RXRA) Agonist;Retinoid X Receptor-Beta (RXRB) Agonist;Retinoid X Receptor-Gamma (RXRG) Agonist
Drug Class	Other Antineoplastics
Current Trial	D
Trial Details	October 25, 2006 Ligand Pharmaceuticals Incorporated announced the completion of the sale of its oncology product line to Eisai Co., Ltd. (Tokyo) and Eisai Inc. (New Jersey) ("Eisai") for approximately $205 million in cash. The sale includes Ligand's four marketed oncology drugs: Ontak (denileukin diftitox), Targretin (bexarotene) capsules, Targretin (bexarotene) gel 1% and Panretin (alitretinoin) gel 0.1%. July 5, 2005 Ligand Pharmaceuticals Incorporated announced tha results of two pivotal Phase III studies (SPIRIT I & SPIRIT II) of Targretin (bexarotene) capsules in front-line combination therapy with standard chemotherapy to treat advanced non-small cell lung cancer (NSCLC) are being presented at the 11th World Conference on Lung Cancer which runs through tomorrow in Barcelona. Intent to treat analysis of both SPIRIT II (Targretin with carboplatin/paclitaxel vs. carboplatin/paclitaxel alone) and SPIRIT I (Targretin plus cisplatin/vinorelbine vs. cisplatin/vinorelbine alone) showed that addition of Targretin to either chemotherapeutic regimen did not improve overall survival nor progression free survival, as has been previously reported at ASCO on May 14, 2005. Further subset analysis of both trials showed that a sizable group of patients developed high grade (NCI grade 3 or 4) hypertriglyceridemia early on during treatment (within 3 weeks) on the Targretin arm. Using this parameter as an index of high sensitivity to Targretin, it was possible to separate the Targretin-treated population in two groups. Those who showed high sensitivity to Targretin (i.e., high grade triglycerides early on) represented 32% of all Targretin-treated patients in SPIRIT I and 40% in SPIRIT II. This sizable subpopulation had a significantly higher overall survival (12.4 months vs. 9.2 months in control for SPIRIT II and 12.3 months vs. 9.9 months in control for SPIRIT I). Pooled data from both studies (595 Targretin-treated patients) showed that the high sensitivity subgroup (215 patients or 36% of all Targretin-treated patients) had an overall survival of 12.3 months vs. 9.5 in the combined chemotherapy control group with a very significant p value of less than 0.0025. Hazard ratio analysis of this patient population revealed a fairly broad demographic distribution of patients across gender, disease stage, ECOG status, tumor histology and smoking history. Notably, in this subgroup, males, stage IV patients and smokers did significantly better than their counterparts in the chemo control arm, showing benefit for patients that typically have worst prognosis in NSCLC. Ongoing additional biochemical and genetic marker analysis is being conducted to optimize a biomarker approach that could help identify determinants of survival and provide the basis for patient selection in future confirmatory studies. May 16, 2005 Ligand Pharmaceuticals Incorporated announced the detailed reports of the results of Ligand Pharmaceuticals Incorporated two pivotal Phase III studies of Targretin (bexarotene) capsules in front-line combination therapy with standard chemotherapy to treat advanced non-small cell lung cancer (NSCLC) were presented Saturday. The oral presentations were given at a lung cancer session at the annual meeting of the American Society of Clinical Oncology in Orlando on Saturday, May 14. As previously announced, the two pivotal Phase III studies did not meet their endpoints of improved overall survival and projected two-year survival. Those results were consistent between both trials despite different geographical study sites and chemotherapy regimens on the intent to treat analysis. In both trials, additional subset analysis completed after the initial intent to treat results were analyzed reveals a significant correlation between high-grade (grade 3 and 4) hypertriglyceridemia and increased survival, potentially identifying a large subgroup patient population that may receive significant survival benefit of added Targretin treatment in first line therapy. March 28, 2005 Ligand Pharmaceuticals Incorporated announced that its two pivotal Phase III studies of Targretin (bexarotene) capsules in front-line combination therapy with standard chemotherapy to treat advanced non-small cell lung cancer (NSCLC) did not meet their endpoints of improved overall survival and projected two-year survival. The studies were designed to evaluate whether adding Targretin to front-line cisplatin/vinorelbine or carboplatin/paclitaxel chemotherapy extends the survival of patients with advanced (Stage IIIB with pleural effusion or Stage IV) NSCLC. In SPIRIT I, patients were randomized to two arms, receiving either cisplatin/vinorelbine chemotherapy alone or

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responsible for managing the overall accounting function, including financial reporting, internal controls, and corporate governance, during a period of significant company growth. From January 1994 to August 2000, he was at the public accounting firm PricewaterhouseCoopers, most recently as a Senior Audit Manager. He received a Bachelor of Science from San Diego State University, and is a Certified Public Accountant and a member of the Association of Bioscience Financial Officers.
Syed Kazmi -- Vice President, Business Development and Strategic Planning
Dr. Kazmi has served as Vice President, Business Development & Strategic Planning since July 2007. Dr. Kazmi has over 18 years of Pharmaceutical R&D and Business development experience. From 1995 until June 2007, he held various positions at Ligand, including Senior Scientist in Molecular Endocrinology, Director of Project Management and leader of multiple drug development teams, and Senior Director of Business Development. Prior to joining Ligand, Dr. Kazmi worked in discovery research at Johnson & Johnson from 1988 to 1995, where his most recent position was Principal Scientist in endocrinology and inflammation drug development programs. From 1985 to 1988, he held his postdoctoral research positions at McMaster University, Hamilton. Dr. Kazmi received a PhD in biochemistry from J.N. University, New Delhi, and an executive MBA from San Diego State University.
Martin D. Meglasson -- Vice President, Discovery Research
Martin D. Meglasson joined the Company in February 2004 as Vice President, Discovery Research. Prior to joining the Company, Dr. Meglasson was Director of Preclinical Pharmacology and the functional leader for research into urology, sexual dysfunction, and neurological diseases at Pharmacia, Inc. from1998 to 2003. From 1996 to 1998, Dr. Meglasson served as Director of Endocrine and Metabolic Research and functional leader for diabetes and obesity research at Pharmacia & Upjohn. From 1988 to 1996, he was a researcher in the fields of diabetes and obesity at The Upjohn Co. and Assistant Professor, then Adjunct Associate Professor of Pharmacology at the University of Pennsylvania School of Medicine. Dr. Meglasson received a Ph.D. in pharmacology from the University of Houston.
Zofia E. Dziewanowska -- Vice President, Clinical Research
Zofia E. Dziewanowska serves as Vice President, Clinical Research and Development of Ligand. She joined Ligand in April of 2002. She has been a clinical research executive holding positions in major pharmaceutical companies as Vice President, Clinical R&D at Hoffmann-La Roche, NJ (until 1995) and, prior to that, Director of Clinical Pharmacology at Merck Company, NJ, with most recent involvement in a biotechnology sector as a Senior Vice President, Clinical R&D, Maxia, Pharmaceuticals, CA, and, prior to that, Sr. Vice President of Clinical R&D at Genta, Pharmaceuticals, CA. She also served for several years at PhRMA as Vice Chair of a Medical Section Steering Committee, and, prior to that, as Chair of an Int'l Sub-committee. She obtained her MD from the Medical School of University of Warsaw and her Ph.D., from the Polish Academy of Science. Her medical degree was re-certified in both the UK and the US. Her academic affiliations include membership of the faculty at The Medical School of Cornell University, Rockefeller University, and The Medical School of the University of London.
Charles S. Berkman -- Vice President, General Counsel and Secretary
Charles S. Berkman is Vice President, General Counsel and Secretary of Ligand Pharmaceuticals Inc.
Audrey Warfield-Graham -- Vice President, Human Resources
Audrey Warfield-Graham directs the department of Human Resources. Ms. Warfield-Graham has worked continuously in the Human Resources department since joining Ligand in December 1994. She has held a progression of positions with increasing responsibilities including Human Resources Coordinator, Compensation & Benefits Administrator and Human Resources Manager. She was promoted to Director, Human Resources in January 2007. Her previous Human Resources experience was with Fresh Western, an interstate agricultural business located in Monterey County California. Ms. Warfield-Graham's management experience includes benefits administration, HRIS, records management, employee relations, leave management, recruitment, staffing strategies and performance management. She received her SPHR certification in January 2007.
Jason M. Aryeh -- Director
Mr. Aryeh has been appointed as director of Ligand Pharmaceuticals Inc. in October 2006. Mr. Aryeh serves as both a Special Advisor to the Cystic Fibrosis Foundation for Drug Discovery, and as Honorary Chairman of the New Mexico Chapter of the CFF in addition to his role as founder and General Partner of JALAA Equities, LLP, a private hedge fund focused on the Biotechnology and Specialty Pharmaceutical sector. Mr. Aryeh earned a B.A. in economics (with honors) from Colgate University, and is a member of the Delta Epsilon Honor Society in Economics.
Todd C. Davis -- Director
Mr. Davis is a Managing Director of Cowen & Company and a principal and founder of Cowen Healthcare Royalty Partners. Previously, Mr. Davis was a partner at Paul Capital Partners, Apax Partners and an operating executive for Elan Pharmaceuticals and Abbott Laboratories. Mr. Davis has served on the boards of several public and private companies, including most Verus Pharmaceuticals, Prism Pharmaceuticals,

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in Houston, TX, by Dr. Nam H. Dang and others. The study was designed to look at Ontak 's activity in relapsed/refractory T-cell NHL. In 17 evaluable patients, there was a 53% response rate with an additional 29% of patients with stable disease. Of the nine patients whose tumors positively expressed the p55 (CD25) component of the IL-2 receptor, 67 per cent showed a complete or positive response. Ontak appeared to be well tolerated at the dosage tested.
7/8/2004 -- Ligand Updates Naveglitazar Development Plan Following Positive Phase II Data Presentation at ADA and New FDA Divisional Guidance for PPAR Drug Development
On July 8, 2004 Ligand Pharmaceuticals Incorporated commented on the positive Phase II data on naveglitazar (LY818) presented at the annual meeting of the American Diabetes Association, and noted the new FDA Divisional guidance for the PPAR class of compounds. The new guidance will delay initiation of all PPAR compound trials greater than six months in duration until two-year rodent toxicity is completed and submitted to the agency for consideration. For naveglitazar that delay will be an estimated 18-24 months. Eli Lilly and Company will review and revise their naveglitazar Phase III development plans accordingly.
3/1/2004 -- Ligand and Lilly Review Phase II Data and Confirm Lilly's Decision to Advance LY519818 into Phase III Studies for Type II Diabetes
On March 1, 2004 Ligand Pharmaceuticals Incorporated announced that Eli Lilly and Company has made the decision to advance LY519818 into Phase III registration studies. LY519818 is a novel, potent, oral, once-daily peroxisome proliferator-activated receptor (PPAR) modulator for the treatment of type II diabetes. Initiation of the Phase III program will follow appropriate consultation with the FDA. LY519818 was discovered through the ongoing research collaboration between Lilly and Ligand.

Regulatory

6/20/2008 -- GSK Update on FDA Review of Promacta
On June 20, 2008 GlaxoSmithKline announced that the United States Food and Drug Administration has extended the priority review period for Promacta (eltrombopag) for the short-term treatment of previously treated patients with chronic idiopathic thrombocytopenic purpura, as they require more time to review the application. The Prescription Drug User Fee action date has been extended to September 19, 2008. GSK will continue to work with the FDA towards the approval of eltrombopag in order to provide physicians and chronic ITP patients with a novel option for treating this difficult disease.
5/30/2008 -- Promacta (eltrombopag) receives unanimous recommendation by FDA Advisory panel
On May 30, 2008 GlaxoSmithKline announced that the United States Food and Drug Administration's Oncology Drugs Advisory Committee (ODAC) unanimously voted, 16-0, that Promacta (eltrombopag) demonstrated a favorable risk-benefit profile for the short-term treatment of patients with chronic idiopathic thrombocytopenic purpura (ITP). The FDA advisory committee was held onsite at the 2008 American Society of Clinical Oncology (ASCO) Annual Meeting. The advisory committee reviewed studies evaluating the safety and efficacy of eltrombopag in the short-term setting. Clinical data were presented and discussed that support eltrombopag increased platelet counts and reduced bleeding.
5/28/2008 -- FDA posts Promacta briefing documents
On May 28, 2008 Ligand announced that it was off $1.29 (36%) to $2.30 after FDA posted briefing documents ahead of Friday's Oncologic Drugs Advisory Committee meeting to discuss an NDA from partner GlaxoSmithKline for Promacta eltrombopag. GlaxoSmithKline is seeking approval of the oral small molecule thrombopoietin (TPO) receptor agonist for the short-term treatment of previously treated patients with chronic idiopathic thrombocytopenic purpura (ITP) to increase platelet counts.
3/3/2008 -- FDA grants Priority Review For Promacta / Revolade (Eltrombopag)
On March 3, 2008 GlaxoSmithKline announced that the United States Food and Drug Administration has granted Priority Review for Promacta / Revolade (eltrombopag) for the short-term treatment of patients with chronic idiopathic thrombocytopenic purpura (ITP). Eltrombopag is an investigational, once-daily oral treatment that induces the production of cells in the bone marrow to generate platelets, which are critical in minimising the incidence of bleeding in chronic ITP.
12/24/2007 -- Wyeth Receives Approvable Letter from FDA for Bazedoxifene for the Prevention of Postmenopausal Osteoporosis
On December 24, 2007 Wyeth Pharmaceuticals, a division of Wyeth, announced that the U.S. Food and Drug Administration has issued a second approvable letter for bazedoxifene, a selective estrogen receptor modulator, for the prevention of postmenopausal osteoporosis. In its letter, the FDA identified several remaining questions regarding issues that had been previously identified during the review process and that were not fully resolved by the Company's complete response to the first approvable letter. The FDA has requested further analyses and discussion concerning the incidence of stroke and venous thrombotic

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